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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/767,510

01/28/2004

Robert W. Warren JR.

STL11664/390-056-USP

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64776 7590 09/03/2008

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EXAMINER

BATTAGLIA, MICHAEL V

ART UNIT

PAPER NUMBER

2627

MAIL DATE

DELIVERY MODE

09/03/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/767,510	<b>Applicant(s)</b> WARREN, ROBERT W.	
	<b>Examiner</b> Michael V. Battaglia	<b>Art Unit</b> 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7, 9-12, 15, 17-20 and 23 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 8, 13, 14, 16, 21, 22 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

***Claim Objections***

1. Claim 13 and 17 are objected to because of the following informalities:
  - a.) On line 2 of claim 13, replacing “zones the” with --zones, the-- is suggested.
  - b.) On line 4 of claim 13, replacing “zone waits” with --zone and waits-- is suggested.
  - c.) On line 2 of claim 17, replacing “instruction” with --instructions-- is suggested.Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 7, 9-12, 15, 17-20 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakamura et al. (hereinafter Nakamura) (US 5,808,995).

In regard to claim 1, Nakamura discloses a method comprising: dividing the storage medium (Fig. 6, element 301) into a plurality of logical zones (“18 sectors” of Col. 3, line 47), the storage medium having an inner diameter and an outer diameter (Fig. 6), each logical zone extending radially from the inner diameter to the outer diameter (Fig. 6); and writing data from a first stream of data within determined bounds of a first logical zone of the plurality of logical zones (“recording . . . of one sector” of Col. 3, line 52 and note that recording on an optical disk

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inherently writes data from a stream of data<sup>1</sup>), wherein the bounds of the first logical zone are determined by an amount of time for rotating through the first logical zone (because “the disk is divided into 18 sectors at equal angles,” the bounds of each sector are determined by “the required time for recording . . . of one sector” when the “optical disk rotates at the same speed” (see Col. 3, lines 46-53 and Fig. 6)) based on a rotational speed of the storage medium (“the required time for recording . . . of one sector” is inherently based on the “speed” at which “the optical disk rotates” (see Col. 3, lines 49-53)) and a size of the first logical zone (“the required time for recording . . . of one sector” is inherently based on the size of the sector, which is 1/18 of the optical disk's surface area (see Col. 3, lines 49-53)). See Response to Arguments below for further explanation.

In regard to claim 2, the dividing the storage medium into a plurality of logical zones of Nakamura inherently comprises determining a number of logical zones (“18 sectors” of Col. 3, line 47) based on the rotational speed of the storage medium and an output data rate (see Col. 3, lines 39-56).

In regard to claim 3, the dividing the storage medium into a plurality of logical zones of Nakamura inherently comprises determining a number of logical zones (“18 sectors” of Col. 3, line 47) based on a data transfer rate of the data storage device and an expected output data rate supported by the data storage device (see Col. 3, lines 39-56).

In regard to claim 4, Nakamura discloses that the method further comprises an index (Fig. 6, element 301b) for at least the beginning of the first logical zone (Col. 3, lines 43-46).

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<sup>1</sup> Also note that the claimed “writing data from a first stream of data within determined bounds of a first logical zone” does not require the entirety of data from a first stream of data is written exclusively within determined bounds of a first logical zone and instead reads on the writing of any portion of data from a first data stream into within determined bounds of a first logical zone.

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In regard to claim 7, Nakamura discloses that the method further comprises writing data from a second stream of data in a second logical zone of the plurality of logical zones (data is written sequentially from a first stream of data into the first logical zone followed by data from a second stream of data into the next/second logical zone).

In regard to claims 9-12 and 15, Nakamura discloses an apparatus (“recording and reproducing apparatus” of Col. 3, line 43) whose function corresponds to the method of claims 1-4 and 7 respectively (see the rejections of claims 1-4 and 7 above and note that storage medium 301 is a rotating storage medium (Col. 3, lines 41-43) and that a “recording and reproducing apparatus” which records and reproduces to/from an optical storage medium inherently has “a read/write head positioned to access data on the storage medium” (see Col. 3, lines 39-56)).

In regard to claims 17-20 and 23, the “recording and reproducing apparatus” of Nakamura (Col. 3, line 43) inherently has a computer readable medium having stored thereon a series of instruction that, when executed by a processor, cause the processor perform the method of claims 1-4 and 7 respectively (see the rejections of claims 1-4 and 7 above).

***Allowable Subject Matter***

3. “[F]ull faith and credit” has been given to the previous examiner’s search (MPEP 704.01). For the reasons specified in the Office action mailed January 22, 2008, claims 13, 14, 21, 22 and 24 would be allowable if rewritten to overcome the objections set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. For the reasons specified in the Office action mailed January 22, 2008, claims 5, 6, 8 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

4. Applicant's arguments filed May 20, 2008 have been fully considered but they are not persuasive. Applicant first argues that "Nakamura fails to disclose or suggest writing data from a first stream of data within determined bounds of a first logical zone of the plurality of logical zones" (Page 8 of Applicant's Response). However, Nakamura discloses writing data within determined bounds of a first logical zone of the plurality of logical zones ("recording . . . of one sector" of the "18 sectors" of Col. 3, lines 46-47 and 52). Because data is written serially on an optical disk using a laser, the data written within determined bounds of the first logical zone is inherently from a stream of data. The claimed "first stream of data" reads on the portion of this inherent stream of data which is written on a "certain track" (Col. 3, line 48) within the determined bounds of the sector. Thus, Nakamura discloses "writing data from a first stream of data within determined bounds of a first logical zone of the plurality of logical zones" and the claim limitation is met.

Alternatively, the claimed "first stream of data" reads on the portion of this inherent stream of data which is written on a "certain track" (Col. 3, line 48) of the optical disk 301. It is not necessary for the entirety of the data from the first stream of data to be written exclusively within the determined bounds of the first logical zone because the claim simply requires that "data from a first stream of data" is written "within determined bounds of [the] first logical zone." Data from the stream of data written on the certain track is written within the determined bounds of each of the 18 sectors/logical zones including the first logical zone when the certain track is written. Thus, Nakamura also discloses "writing data from a first stream of data within

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determined bounds of a first logical zone of the plurality of logical zones” using the alternate interpretation of “first data stream” and the claim limitation is met.

Next, Applicant argues that “Nakamura fails to disclose or suggest that the bounds of the first logical zone are determined by an amount of time for rotating through the first logical zone based on a rotational speed of the storage medium and a size of the first logical zone” because “[i]nstead, Nakamura . . . merely teaches that [*inter alia*] ‘the disk is divided into 18 sectors at equal angles’” (Pages 8-9 of Applicant’s Response). However, Applicant fails to realize the full import of Nakamura’s determination of the bounds of the sectors/logical zones by dividing the disk into 18 sectors/logical zones at equal angles.

When the bounds of the sectors/logical zones are determined by dividing the disk into 18 sectors/logical zones at equal angles, the bounds of each sector/logical zone are also determined by “the required time for recording . . . of one sector” when the “optical disk rotates at the same speed” (see Col. 3, lines 46-53 and Fig. 6 and note the inherent relationship between 18 sectors divided at equal angles and the time for rotating through one sector, which is 1/18 of the time required for one disk rotation when the disk rotates at constant speed). As a result, the bounds of the first logical zone are determined by an amount of time for rotating through the first logical zone. Furthermore, the amount of time for rotating through the first logical zone is inherently based on a rotational speed of the storage medium (faster rotational speeds mean shorter amounts of time for rotating through the first logical zone) and a size of the first logical zone (longer/larger sizes of the first logical zone mean longer amounts of time for rotating through the first logical zone).

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As a result, because the bounds of the sectors/logical zones of Nakamura are determined by dividing the optical disk into 18 sectors/logical zones, the bounds of the sectors/logical zones of Nakamura are also determined by an by an amount of time for rotating through the first logical zone based on a rotational speed of the storage medium and a size of the first logical zone, and the claim limitations are met.

Accordingly, Applicant's arguments are unpersuasive and the claim rejections are maintained.<sup>2</sup>

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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<sup>2</sup> Applicant presented no arguments specifically in regard to the rejections of dependent claims 2-4, 7, 10-12, 15, 18-20 and 23.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael V. Battaglia whose telephone number is (571)272-7568. The examiner can normally be reached on M-F, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, A. Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael V. Battaglia/  
Primary Examiner, Art Unit 2627